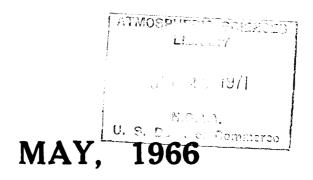


# MONTHLY WEATHER REPORT

**VOLUME 9** 

NUMBER 5



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U.D.C. 551. 506.1 (62)

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## PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties the U.A.R. Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to:
"The Director General, Meteorological Department, Kubri-el-Oubbeh — CAIRO".

#### THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

#### THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

#### THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

#### THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

#### CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

#### METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institude for Research and Training" and the Operational Divisions of Meteorological Department.

#### TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in the U.A.R.



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METEOROLOGICAL DEPARTMENT CAIRO

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Note: For explanatory notes on tables please refer to volume 9 number 1 (January 1966).

#### GENERAL SUMMARY OF WEATHER CONDITIONS

#### **MAY 1966**

Alternatively hot and mild, characterized with four variant khamsin disturbances whose transits were rather sandy and breakdowns light rainy in few scattered localities

#### GENERAL DESCRIPTION OF WEATHER

The prevailing weather was changeable in general, intervened with four variant khamsin disturbances which were of rather short durations in the northern parts of the Republic and of moderate durations in the middle and southern parts. Heat waves attained their peaks round the 1st, 12th, 18th & 30th respectively. The third heat wave was the most excessive in the middle & southern parts while the 4th was the most excessive in the northern parts.

Transits of khamsin disturbances were associated with local rising sand while their break downs were followed by mild intervals and light rain over few scattered localities particularly in the northern & middle parts.

The monthly rain was subnormal in general. Few occasions of misty or foggy days were marked over scattered localities of the Delta, Canal & Cairo areas.

#### PRESSURE DISTRIBUTION

The prevailing surface pressure systems during this month were:

- High pressure extending from the Azores northeastwards towards West Europe and southeastwards through the Mediterranean and NE Africa.
- The Siberian anticyclonic ridge over southwest Russia.
- Travelling deep low pressure systems through north Europe and the attached secondaries over Italy and the Balkans.

- Travelling khamsin depressions.

During this month the barometric pressure in U.A.R. was oscillatory and experienced several falls attaining successive minima round the 3rd, 7th, 12th, 18th, 23rd, 27th & 31st respectively.

On the first day of the month, a khamsin low was observed over the Western Desert, it moved rapidly through East Mediterranean on the 2nd and through Iraq on the 3rd. This low was accompanied with a slight northward elongation of the Sudan trough.

A secondary depression developed over North Italy on the 6th at the foot of the deep low pressure system over North Europe. It proceeded eastwards, traversed North Balkans by the 8th, then it continued its motion NE wards towards the Black Sea. Duing the same period the complex monsoon low over Arabia showed a north-west elongation and the barometric pressure in U.A.R. experienced a second fall.

Another secondary depression developed over Italy on the 10th which moved eastwards reaching North Balkans on the 11th, then it continued its motion north-eastwards on the 12th when the Sudan trough showed a north-ward elongation and accordingly the barometric pressure in our country experienced a third fall.

The second khamsin depression during this month developed over west of the Libyan Desert on the 14th in the south-east vicinity of the main West Mediterranean depression. The khamsin secondary moved slowly east-wards traversing the northern parts of the country on the 18th, then it continued its course afterwards through East Mediterranean and Iraq. The transits of this khamsin low caused a subnormal fall in barometric pressure with a pronounced minimum on the 18th.

Local high pressure established over East Mediterranean between the 21st and 24th when the barometric pressure in U.A.R. was slightly above its normal.

On the 25th a deep low pressure system traversed the northern parts of Europe eastwards, it was associated with a shallow secondary over Italy. The whole system proceeded eastwards traversing the Balkans on the 27th. During the same period, the Sudan trough showed a northwards elongation towards the south-east corner of the Mediterranean. Accordingly a marked fall in the barometric pressure in our country was observed with a minimum on the 27th.

On the 30th a khamsin low developed east of the Gulf of Serte; it proceeded eastwards traversing the Western Desert on the 31st.

In the upper levels the prevailing pressure distribution over the 700, 500 mb charts were confined in the following upper systems:

- Two deep upper low pressure systems one over North Russia and the other over North Atlantic.
- Minor transitory upper lows or troughs through latitudes between 30, 45°N.
- Upper high pressure belt over subtropical latitudes.

During this month four secondary upper lows and a secondary upper trough developed over middle latitudes. The first upper low was observed over Central Mediterranean on the 1st, it moved NE wards and its southern trough crossed East Mediterranean on the 4th. The second upper low developed over Italy on the 7th, it moved slowly eastwards and its southern trough traversed East Mediterranean

on the 13th. The third upper low developed over West Mediterranean on the 14th, it moved slowly NE wards and its southern trough passed through East Mediterranean on the 20th. On the 21st a secondary upper trough was observed over Central Mediterranean, it moved eastwards traversing East Mediterranean on the 24th. The last upper low during the month developed north of Greece on the 27th. It moved slowly eastwards and its trough crossed East Mediterranean by the end of the month.

The highest wind speed in upper air at Mersa Matruh, Helwan & Aswan was 150, 152 & 110 knots on the 8th, (6th & 26th) & 6th respectively.

#### SURFACE WIND

The most preveailing winds during this month were light to moderate N ly & NW ly. Winds become fresh to strong during many days of the month in many localities of the Red Sea district and during few days in scattered localities of the northern coast, Western Desert & Upper Egypt districts. On the other hand winds dropped to calms most of night and early morning intervals in scattered localities.

Gales were reported at: Kabrit on the 11th; Aswan on the 20th and at Hurghada on the 3rd, 11th & (20th-25th).

#### **TEMPERATURE**

This month was characterized by four heat waves followed by mild periods. The heat waves were of short durations in the northern parts and moderate durations in the middle & southern parts and they reached their peaks round the 1st, 12th, 18th & 31st.

Maximum temperature oscillated above normal during the heat waves and their values ranged between 26°C, 38°C (2°C-12°C above normal) in the northern parts, between 31°C, 44°C (2°C-9°C above normal) in the middle parts and between 36°C, 54°C (2°C-7°C above normal) in the southern parts. During the

mild periods maximum temperatures were about 2°C-5°C below normal and their values ranged between 21°C, 25°C in the northern parts, between 26°C, 34°C in the middle parts and between 34°C, 39°C in the southern parts.

The absolute maximum air temperature for the Republic was 46.0°C reported at Dakhla & Kharga on the 18th.

Minimum temperatures oscillated round normal in the northern & middle parts and their values ranged between 10°C, 18°C in general (2°C-5°C below or above normal). As an exception in the middle parts minimum temperatures ranged between 18°C & 25°C (2°C-9°C above normal) during the heat waves. In the southern parts minimum temperatures ranged between 19°C, 26°C in general with departure of 2°-5°C from normal.

The absolute minimum air temperature for the Republic was 8.2°C reported at El Kasr on the 10th.

#### **PRECIPITATION**

During this month rainfall was generally subnormal and confined to few scattered localities mainly in the northern and middle parts where light rain fell round the 1st, 21th, 18th &24th.

The absolute monthly rainfall for the Republic was 1.1 mms reported at Kharga & Hurghada while the maximum daily rainfall was 1.1 mms reported at Kharga on the 25th.

Cairo, March 1971

M. F. TAHA
Under Secretary of State
Director Geneal
Meteorological Department

## TABLE A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

MAY - 1966

	Atmos Pressur					Air '	Temperatu	re °C				Relat			ht Sunshir		mms	
<b>5</b>		S.L	Maxi	imum	Mini	mum		Dry	Bulb	Wet	Bulb	Humidi	ty %	Dura	tion (Hou	rs)	stion In	
STATION	Mean	D.F Normal or Average	(A) Mean	D.F Normal or Average	(B) Mean	D.F Normal or Average	A+B 2	Mean	D.F Normal or Average	Mean	D.F Normal or Avesage	Меап	D.F Normal or Average	Total Actual	Total Possible	%	Piche Kyaporation mms. Mean	
Ballum Mersa Matruh (A) Alexandria (A) Port Said (A) El Arish	1015.4 1015.6 1015.1 1014.8 1014.8	+1.5 +2.1 +2.2 +2.1 +2.7 +2.3	24.7 24.6 27.0 24.3 26.0 25.0	-1.5 -0.9 +0.4 -1.3 -0.9 +0.2	16.7 14.7 15.6 20.4 16.4 16.2	+0.2 +0.2 -0.9 +0.8 +0.3 -0.2	29.7 19.6 21.3 22.4 21.2 20.6	20.3 19.7 21.0 22.2 21.3 20.9	-0.6 0.4 0.4 +0.2 0.2 0.1	16.5 16.4 17.1 18.5 18.4 17.8	+0.3 +0.1 -0.6 -0.5 +0.6 -0.1	66 70 66 69 74 73	+ 7 + 4 1 1 + 7 + 1	307.0 325.1 - 330.2	425.6 425.6 	72 76 77	7.1 6.8 7.1 7.2 5.2 4.8	1
Tanta	1013.8	+1.7 +2.0	31.6	-0.7 -0.7	15.3 17.8	+0.9	23.2 24.7	22.6 24.5	-0.0 -0.1	16.6 14.6	+0.2	51 40	+ 2 - 3	334.5	424.5	79	7.0	ì
Fayoum	1013.7 1013.0 1012.0 1010.3 1009.4	+1.7 +2.0 +1.3 +1.5 +0.8	33.1 34.8 35.5 38.9 38.6	-0.6 -0.1 -0.6 +0.1 +0.5	17.4 17.0 19.7 21.1 22.1	+0.2 +0.6 +0.5 +1.0 +1.4	25.2 25.9 27.6 30.0 30.4	25.2 25.9 27.5 30.6 31.5	+0.2 +0.2 -0.1 +0.5 +1.5	16.5 16.1 15.7 17.6 15.9	+0.5 -0.5 -0.0 +0.2 +0.4	36 31 22 21 11	+ 1 - 5 0 - 1 - 1	307.0	419.4	73	11.8 14.5 23.5 16.9 24.2	
Bahariya	1013.9 1013.6 1013.7 1012.4 1011.3	+1.0 +1.8 +0.1 +2.0 +1.0	33.4 34.0 33.0 37.1 37.4	-0.8 $-0.4$ $-1.3$ $+0.2$ $-0.3$	17.9 18.5 15.9 18.9 23.5	+1.3 +1.3 -0.8 -0.6 +3.6	25.6 26.2 24.4 28.0 30.4	26.0 26.6 24.6 28.4 30.4	+0.4 +0.9 0.9 0.8 +2.4	16.0 16.2 16.1 15.5 15.9	+0.5 +0.3 +1.6 +0.5 +0.2	30 29 37 18 19	+ 1 + 1 + 14 - 6 - 3		413.9	- - 71	17.6 13.1 18.0 22.8 31.0	
Iurghada	1011.1 1010.5 1011.2	+1.8 +1.2 +2.1	31.1 30.9 29.9	+0.4 +1.2 -0.4	21.1 21.2 22.9	+0.6 +0.8 +0.1	26.1 · 26.0 26.4	25.4 26.3 26.6	+0.3 +0.7 -0.1	19.5 17.5 18.9	+0.5 -0.5 +0.3	55 38 45	+ 1 - 6 + 1	=	=		15.0 23.5 31.0	

			Ж	ximum '	rempera	ture *(				Grass Tem				Minimu	т Тетре	rature '	c		
STATION	Highest	\$	Lowest	3	No.	of Da	ys with	Max-T	emp.	Mean	From Normal	lest	Date	Lowest	2	N		Days wi Temp.	ith
	Higl	Date	Lov	Date	>25	>30	>35	>40	>45	X	D. From	Highest	Ď	Lov	Date	<10	< 5	< 0	<-
allum  fersa Matruh (A)  lexandria (A)  ort Said (A)  A Arish	35.8 38.1 36.0 28.5 33.9 33.5	30 30 31 31 31 2	20.6 20.8 27.5 22.0 23.0 23.0	12 5 7 7 7	9 8 17 10 15 13	3 2 7 0 4 2	1 1 3 0 0	0 0 0 0 0	0 0 0 0 0 0	15.7 — 18.9 14.9 15.6		21.2 18.7 18.6 22.7 19.9 20.3	30 30 18 18 26 19	12.8 11.3 10.7 18.2 12.9 13.0	7 7 8 5 7 8	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0
anta	39.0 41.6	31 18	26.0 26.4	4, 23 23	31	16	5	0	0	_	-	20.4 25.1	31 31	11.4	11	0	0	0	0
ayoum (A) inya (A) sayout (A) saxor (A) swan (A)	42.1 44.3 44.8 44.8 45.3	18 18 18 18	28.1 30.0 30.0 31.6 33.8	7 7 3,7 25 8	31 31 31 31 31 31	22 29 29 31 31	10 12 16 25 26	2 5 4 16 16	0 0 0 0 1	15.0 14.5 17.9 15.8		22.2 22.8 26.1 27.4 28.0	18 19 19 19	14.0 11.8 15.2 15.8 16.2	11 9 8 8 9	0 0 0 0	0 0 0	0 0 0	0 0 0
wa	42.0 41.2 42.2 46.0 46.0	31 13,17 17 18 18	27.3 28.4 27.7 31.2 29.1	3,6 4 2 5 25	31 31 31 31 31 31	23 24 19 31 30	11 15 12 19 21	2 3 2 10 10	0 0 0 1 1	16.9 16.9 — — 21.3		22.3 23.9 23.2 26.0 28.0	17 13 18 20 14	12.8 12.8 9.7 12.6 13.4	7 8 7 6,8 8	0 0 1 0 0	0 0 0 0	0 0 0 0	0 0
or	39.0 36.5 35.7	13 18 18	26.2 27.4 26.8	25 27 27	31 31 31	17 19 14	4 3 1	0 0 0	0 0	20.5 21.6	_	23.8 26.6 25.8	19 20 18 • 19	15.8 15.8 19.1	7 7 6	0 0 0	0	0 0 0	0

#### TABLE A 3.—SKY COVER AND RAINFALL

MAY - 1966

		Mean	Sky Cove	r (Oct)					Rain	ıfall (n	ams)					
Station	00 U.T.	06 U.T.	12 U.T.	18 U.I.	Daily Mean	Total Amount	Dev. From Normal	Max. in one			Number	ı	with 1 ≥5.0	Amount ≥10	of Rai	n ≥ 5
lallum								0.1	1 10 15							
Altum  Lora Matruh . (A)  Lorandria . (A)  Lort Said . (A)  I Arish	2.4 1.5 2.7 1.3 2.3 2.6	3.6 3.6 2.4 2.6 3.4	3.6 3.3 3.3 2.6 2.8 2.8	3.4 1.8 3.8 1.8 2.5 2.9	2.9 2.4 3.4 2.0 2.7 2.9	0.2 Tr. 0.0 0.3 0.2 0.0	- 2.1 - 2.5 - 2.0 - 2.7 - 3.1 - 3.0	0.1 Tr. 0.0 0.2 0.1 0.0	12·15 18 — 1 1 1·2	0 1 0 1 0 0	2 0 0 2 2 0	0 0 0 0 0	0 0 0 0	0 0 0	0 0 0 0	
anta	0.4	1.8	3.2	1.5	1.7	0.4	<b>- 3</b> .3	0.4	1	0	1	o	o	0	0	
uiro (A)	1.4	3.1	3.5	2.1	2.6	Tr.	- 0.7	Tr.	1 - 20	2	0	0	0	0	0	
nyogin	1.2 1.8 2.4 2.3	2.0 2.0 2.5 3.4 3.3	2.8 2.6 2.6 3.4 2.9	2.1 2.1 2.4 2.9 2.9	2.0 2.3 2.9 2.9	Tr. Tr. 0.0 0.9 0.0	- 1.3 - 0.6 - Tr. + 0.5 - Tr.	Tr. Tr. 0.0 0.9 0.0	1 1 - 24 -	1 1 0 1 0	0 0 0 1	0 0 0	0 0 0 0	0 0 0 0	0 0 0	
va	1.7 0.7 — 1.7 1.8	2.8 1.9 2.9 3.1 2.7	3.2 2.6 3.8 3.7 3.3	3.1 1.9 1.7 2.3 2.6	2.6 1.8 2.5 2.6	0.1 0.3 0.0 Tr. 1.1	- 1.7 + 0.2 - 0.1 - 0.1 + 0.8	0.1 0.3 0.0 Tr, 1.1	19 3 	0 2 0 2 0	1 1 0 0	0 0 0 0	0 0 0	0	0 0	
e	1.2 2.2 2.6	2.5 2.5 2.8	3.4 8.0 3.6	2.7 2.8 2.6	2.6 2.7 2.9	Tr. 1.1 Tr.	- 0.2 + 6.7 0.0	Tr. 6.5 Tr.	2 25 2:27	1 6 2	0 4	0	0	0	0	

] Ossa I

#### TABLE A 4-DAYS OF OCCURRENCE OF MISCELLANEQUS WEATHER PHENOMENA.

MAY-1966

		Preci	piation			or th	≥1000 metres	tres	tree	Vis	rising fetres	storm fetres			
Station	Rain	Snow	Ice Pellets	Hail	Frost	Thunderstorm	Mist Vie ≥1000	Fog Vis < 1000 Metres	Herre Vis ≥ 1000 Metres	Thick Here Vis	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloud; Sky
allum .  Ieria Matruh . (A) lexandria . (A) ort Said . (A) il Arish	2 0 0 2 2 0	0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	0 3 4 0 6	0 1 1 0	0 0 1 0 0	0 0 0 0	3 1 1 0 1	0 0 0 0	0 0 0 0 0	11 11 10 18 14 11	0 1 0 0 0 1 1
'anta	1	0	0	0	0	0	0	0	0	9	0	0	0	22	0
laira	0	0	0	0	0	0	8	O,	4	0	2	0	0	17	0
fayoum finya (A) lasyout (A) lasyout (A) laswan (A)	0 0 0 1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 1 14 15 1	0 0 0 0	0 2 9 9	0 0 0 0 5	0 0 0 0 1	19 15 13 11	1 1 3 0
liwa Bahariya Farafra. Dakhia Charga	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0.0.0	0 0 0 0	0 0 1 4	0 0 0 0	2 1 3 9 10	0 1 0 0	0 0 0 0	14 20 	1 0 
For	0 4 0	0	0 0 0	0 0 0	0 0 0	0 0 0	0 0	0	7 0 1	0	11 2 1	0 0	0 8 0	12 15 14	1 1

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## TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

MAY - 1968

	(s)	(S21	ours)			Num	ber i				rence:				ng fr	om ti	10
Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	345 / 014	015 / 044	045 / 074	075 / 104	1	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	1	All directions
Sallum	46	15	0	1—10 11—27 28—47 ≥48 All speeds	47 22 0 0 69	143 29 0 0 172	138 11 0 0 149	75 8 0 0 83	21 0 0 0 21	3 1 0 0 4	7 5 0 0	2 6 0 0 8	9 0 0 0 9	13 2 0 0 15	36 39 0 0 75	46 20 0 0 66	540 143 0 0 683
Mersa Matruh (A)	16	0	0	1—10 11—27 28—47 ≥48 All speeds	53 51 0 0	145 34 0 0 179	36 26 0 0 62	39 18 0 0 57	36 45 0 0 81	21 15 0 0 36	18 9 0 0 27	2 13 0 0 15	5 4 0 0 9	35 2 0 9 37	50 6 0 0 56	30 35 0 0 65	470 258 0 0 728
▲lexandria (A)	41	2	0	1—10 11—27 28—47 ≥48 All speeds	121 17 0 0 138	92 16 0 0 108	50 9 0 0 59	25 9 0 0 34	42 7 0 0 49	14 0 0 0 14	10 0 0 0 10	7 0 0 0 7	6 1 0 0	26 7 0 0 <b>33</b>	27 14 0 0 41	129 72 0 0	549 182 0 0 704
Port Said (A)	1	3	1	110 11-27 2847 ≥48 All speeds	127 150 0 0 277	75 68 0 0	30 50 0 0 80	33 13 0 0 46	18 1 0 0 19	13 0 0 0 13	8 1 0 0	0 0 0	13 2 0 0 15	16 11 0 0 27	4 22 0 0 26	34 49 0 0 83	372 367 0 0 739
Tante	14	3	0	110 1127 2847 ≥48 All speeds	137 3 0 0 140	90 0 0 0 90	49 1 0 0 50	57 1 0 0 58	46 1 0 0 47	10 0 0 0	5 0 0 0 5	3 0 0 0 3	20 1 0 0 21	46 2 0 0 48	109 0 0 0 109	145 1 0 0 146	717 10 0 0
Cairo ( <u>A</u> )	8	0	16	I—10 11-27 28-47 ≥48 All speeds	51 0 0	111 100 0 0 211	74 66 0 0	29 37 0 0 66	7 21 0 0 28	5 5 0 0	1 0 0 0 1	0 4 0 0 4	3 2 0 0 5	10 7 0 0 17	20 22 0 0 42	58 20 0 0 78	385 335 0 0 729
Payoum	1	11	0	11—27 28—47 ≥48	4 0 0	108 0 0 0 108	20 0 0 0 20	6 0 0 6	4 0 0 0 4	2 0 0 0 2	5 0 0 0 5	6 0 0 0	7 0 0 0 7	7 0 0 0 7	1 0 0	133 4 0 0 137	723 9 0 0 732
Minya (A)	2	14	3	11—27 28—47 ≥48	159 198 1 0 358	16 7 0 0 23	2 0 0 0 2	0 0 0 0	1 0 0 0	4 0 0 0 4	5 1 0 0 6	1 0 0 0 1	1 2 0 0 3	8 2 0 0 10	3 0 0	162 120 0 0 283	391 333 1 0 725

TABLE A 5. (contd.)-NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

MAY - 1966

	Ê	are)	lours)			Nun	ber i					s of v			ng fr	om ti	
Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	345 / 014	1	1	1	1	1	1	1	1	1	1	1	All directions
Asyout	0	0	1	1—10 11—27 28—47 ≥48 All speeds	17 32 0 0 49	18 13 0 0	7 0 0 0 7	9 1 0 0	8 1 0 0	2 0 0 0 2	2 0 0 0 2	4 0 0 0 4	48 0 0 0 48	181 6 0 0 187	149 31 0 0 180	85 129 0 0 214	530 213 0 .0 743
Luxor	3	2	0	1—10 11—27 28—47 ≥48 All speeds	58 0 0 0 58	57 0 0 0 57	39 0 0 0 39	23 0 0 0 23	16 0 0 0 16	26 0 0 0 26	64 0 0 0 <b>64</b>	28 0 0 0 28	16 0 0 0 16	61 0 0 0 <b>61</b>	180 9 0 0 189	153 9 0 0 162	721 18 0 0 739
Aswan	4	0	0	110 1127 2847 ≥48 All speeds	1 0	159 121 0 0 289	20 2 0 0 22	6 3 0 0 9	1 0 0 0	1 0 0 0 1	0 0 0	0 0	1 0 0 0	0 0 0 0	6 0 0 6	42 18 0 0 <b>60</b>	434 305 1 0 740
Gharga	6	3	39	1.—10 11 -27 28.—47 ≥48 All speeds	135 294 1 0 430	59 65 0 0	7 1 0 0 8	2 0 0 0	4 0 0 0 4	7 1 0 0 8	3 0 0 0 <b>3</b>	1 0 0 0	1 0 0 0	9 0 0 9	13 1 0 0 14	61 31 0 0 92	302 393 1 0
Siwa	0	3	2	1—10 11—27 28—47 ≥48 All speeds	22 5 0 0 27	49 11 0 0	86 44 0 0 130	94 57 0 0 151	66 32 0 0 98	40 17 0 0 57	25 5 0 0 30	16 0 0 0 16	12 0 0 0	43 17 0 0 60	46 21 0 0 67	21 10 0 0 31	520 219 0 0 739
Dakhla	0	7	0	1-10 11-27 28-47 ≥48 All speeds	72 32 0 0 104	62 4 0 0 66	54 0 0 0 54	44 0 0 0 44	27 1 0 0 28	20 0 0 0 20	46 0 0 0 46	18 0 0 0 18	36 0 0 0 36	63 0 0 0 <b>63</b>	70 5 0 0 75	134 49 0 0 183	646 91 0 0 737
. Hurghada	1	o	0	28—47 ≥48	9 188 10 0 207	9 20 0 0 <b>29</b>	3 3 0 0 <b>6</b>	1 4 0 0 5	1 0 0 0	9 0 0 9	0 0 0 0	0 0 0 0	2 0 0 0 2	6	4	17 240 71 0 328	84 568 91 -0 748
Quaeir	0	7	0	11—27 28—47 ≥ 48	123 224 0 0 347	47 16 0 0 63	6 0 0 0 <b>6</b>	2 0 0 0 2	1 0 0 0 1	4 0 0 0 4	5 0 0 0 <b>5</b>	2 0 0 0 2	2 0 0 0 3	5 0 0 0 5	2 0 0	154 70 0 0 224	425 312 0 0 737

### TABLE B 1. - UPPER AIR CLIMATOLOGICAL DATA

MAY - 1966

aoi	Pressure	Alti	tude of Pres	sure Surface	gpm)		Tempe	rature (°C)		Dow	Point (°C)
Station	Surface Millibar	N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Moan
Meres Matruh 0000 U.T.	Surface 1000 850 700 600 500 400 300 200 150 100 70 60 50 40 30 20	26 26 26 26 26 27 26 24 23 18 11 5 5 4	1016mb 163 1544 3149 4381 5788 7439 9531 12099 13913 16430 18604 19560 20694 22096 23913	** 1022mb 210 1584 3207 4460 5885 7552 9580 12263 14025 14025 18680 19633 20763 22156 23378	1009mb 106 1517 3094 4300 5680 7292 9254 11960 13832 16377 18510 19450 20578 21978 23805	26 26 26 26 26 26 26 24 23 18 11 5 5 4 4	15.9 16.3 13.3 3.3	19.5 20.0 21.3 8.0 - 1.711.622.838.347.852.261.260.759.155.951.3	11.6 11.4 7.1 - 2.3 -10.0 -20.0 -33.1 -47.6 -61.6 -67.3 -70.1 -67.0 -68.7 -61.5 -58.7 -55.1	26 26 24 14 12 9 7 1	13.3 12.1
Helwan 9000 U.T.	Surface 1000 850 700 600 500 400 300 200 150 100 70 60 40 50 30 20	31 31 31 31 31 31 31 31 31 31 31 32 28 25 20 14	997mb 119 1512 3134 4380 5804 7442 9499 12176 13981 16463 18626 19561 20692 22102 23947 26668 31219	1002mb 158 1557 3175 4424 5860 7534 9581 12242 14058 16561 18720 19661 20807 22221 24071 26732 31245	991mb 68 1465 3085 4308 5700 7339 9347 12041 13895 16386 18540 19460 20530 21983 23811 26450 31169	31 31 31 31 31 31 31 31 31 31 32 28 25 20	20.5 18.4 16.1 6.6 — 1.8 —11.9 —24.2 —39.6 —56.4 —61.2 —66.8 —65.7 —62.7 —59.2 —56.5 —53.1 —48.6 —41.9	30.7 21.8 22.1 10.7 — 0.7 — 8.3 —20.6 —37.0 —49.4 —54.1 —60.6 —62.0 —58.4 —53.8 —52.2 —49.4 —38.1 —40.5	15.8 15.8 9.0 1.0 -6.6 -17.2 -30.2 -42.4 -63.3 -71.4 -72.5 -69.5 -68.2 -63.1 -59.4 -55.7 -55.4 -43.6	31   5   22   18   19   16   12   5   —   —   —   —   —	8.3 7.4 -2.0 -6.4 -12.5 -20.1 -39.1 -44,1 -
Aevan 0000 U.T.	Starface 1000 850 700 600 500 400 300 200 150 100 70 60 50 40 30 20 110	19 19 19 19 19 19 17 17 17 14 9 6 4 4 4 4	988mb 89 1509 3161 4424 5864 7565 9633 12328 14125 16533 18691 19628 20762 22163 23994 26631	992mb 124 1529 3196 4467 5909 7623 9715 12464 14279 16681 18830 19761 20891 22295 24140 26693	985mb 60 1492 3124 4377 5794 7498 9551 12229 13998 16380 18555 19506 20600 22,007 23833 26569	19	25.8  23.1 10.6 1.2	30.8 29.3 14.3 5.1 	19.8	19 7 14 13 8 6 6 	1.8 -6.9 -10.7 -20.6 -27.8 -39.4

N - Number of observations of specified pressure surface.

<sup>•</sup> The atmospheric pressure corrected to the elevation of the radiosonde stations

#### TABLE B 1 (contd.)-UPPER AIR CLIMATOLOGICAL DATA

MAY - 1966

Station	Pressure Surface	A	ltitune of Pr	essure Surfa	ce (gpm)		Temp	erature (°C)		Dow	Point (°C)
<b></b>	Millibar	N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Moss
Morsa Matrub 1200 U.T.	Surface 1000 -850 700 600 500 -400 -300 -300 -150 -100 -70 -60 -50 -40 -30 -20 -10	26 26 26 25 26 26 26 25 24 19 6 3 3 2	1017mb 172 1561 3173 4410 5825 7483 9508 12169 13980 16496 18703 19631 20781 22276 24214 26939	1021mb 208 1594 3231 4484 5915 7591 9637 12289 14071 16647 18860 19732 20877 22312 24297 27090	116 1527 3113 4338 5733 7359 9382 11966 13841 16345 18600 19529 20668 22240 24130 26848	26 26 26 25 25 26 26 26 26 25 34 19 6 3 3 2 2	22.1 20.3 14.1 4.6 -3.9 -13.6 -26.1 -40.9 -56.2 -58.9 -62.4 -62.2 -59.6 -56.3 -56.3 -52.2 -46.9 -40.5	26.3 24.8 22.3 8.9	18.9 15.5 4.1 	26 26 29 14 10 10 6 	15.0 11.9 - 1.4 - 7.0 -12.1 - 21.8 - 31.0 
Helwan 1200 U.T.	Surface 1000 850 700 600 500 400 300 150 100 70 -60 50 -40 30 20 10	31 31 31 31 31 31 31 31 31 31 31 32 28 25 22 19	997mb 117 1529 3159 4408 5843 7513 9560 12236 14050 16553 18719 19867 20806 22217 24061 26748 31499	1002mb 158 1577 3215 4473 5908 7596 9671 12369 14187 16696 18870 19825 20968 22403 24273 26980 31619	994mb 76 1496 3103 4344 5734 9388 12083 13944 16447 18600 19570 20713 22131 23969 26597 31355	31 31 31 31 31 31 31 31 31 31	30.5 28.8 17.7 7.5 	37.6 30.6 25.0 11.8 1.3 -6.3 -20.0 -35.0 -47,0 -53.7 -61.0 -52.4 -55.0 -51.0 -48.4 -40.5 -33.2	25.4 27.5 11.6 1.2 — 6.7 —16.9 —28.4 —42.0 —62.4 —63.1 —70.0 —69.3 —66.8 —67.0 —58.0 —48.2 —33.6	81 4 25 17 16 17 14 9	4.8 11.0 0.8 5.5 10.4 38.8 28.7 41 6
Aswan 1200 U.T.	Surface 1900 850 700 600 500 400 300 200 150 100 70 60 50 40 20	16 10 16 14 13 13 13 10 10 10 7 6 6 5 5	987mb 71 1528 3191 4465 5918 7626 9715 12451 14262 16676 18829 19757 20788 22206 24161 26919	990mb 102 1547 3231 4522 5985 7694 9808 12597 14465 16823 19090 20035 21155 22561 24408 27094	985mb 54 1496 3135 4423 5865 7571 9664 12388 14118 16564 18670 19576 20708 22118 23978 26817	16 — 16 16 14 13 13 13 10 10 10 7 6 6 5 5 3 —	38.3	43.5 - 32.1 16.9 6.1 - 4.6 -15.8 -29.2 -45.0 -57.1 -67.8 -66.3 -61.2 -56.0 -51.7 -48.0 -37.0	32.5	16	4.3 

We Number of observations of specified pressure surface.

<sup>\*</sup> The atmospheric pressure corrected to the elevation of the radiosonde stations.

## TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE; THE HIGHEST WIND SPEED IN THE UPPER AIR

MAY - 1966

			,		Fr	eezing !	Level				1		<del></del>	First	Tropor	ause				High	est wi	nd sp	beed
			Mean			Highes	t		Lowest			Mean			Highes		·	Lowest		Œ	b.)		ot s
	Station	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)	Speed in Knots
		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh (A)	<b>36</b> 00 (26)	662 (26)	-9.1 (12)	4250	617	-11.2	2710	736	_	12229 (18)	200 (18)	- <b>6</b> 5.6 (18)	16394	100	-61.2	9341	300	<b>-4</b> 6.1	<b>1350</b> 0	159	244	119
0000 UT	Helwan	4066 (31)	623 (31)	-10.8 (19)	4480	593	_	3230	688	_	13676 (31)	161 (31)	-63.3 (31)	16230	105	-70.9	10930	237	<b>-48.</b> 8	15170	125	260	152
	Aswan . (A)	4635 (19)	585 (19)	-11.9 (12)	5207	542	-	4100	620	-9.8	15990 (8)	111 (8)	-74.2 (8)	<b>16</b> 669	100	-71.8	14570	136	-70.8	<b>123</b> 70	191	250	110
		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matrub (A)	3825 (26)	646 (26)	-10.5 (15)	4190	618	-	3320	684	_	12114 (25)	203 (25)	-54.0 (25)	14200	145	-58.0	10120	266	<b>-4</b> 8.9	12935	180	262	150
1900 U.T.	Helwan	4240 (31)	651 (31)	-10.0 (17)	5030	557		3380	680	-	14252 (30)	152 (30)	-63.3 (30)	17997	80	-70.4	11330	<b>2</b> 25	-49.3	10450	253	250	15\$
: 1	Aswan , (A)	4880 (14)	570 (14)	-13.7 (9)	5200	550	-11.8	4540	592	-	16716 (6)	102 (6)	-73.4 (6)	17800	87	-73.3	15110	131	-70.2	12750	_	<b>26</b> 0	100-

I - The number of cases the element has been observed during the month.

# TABLE 8 3.— NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES MERSA MATRUH (A) — MAY 1966

					. ,				Win	ad be	tweer	ran	ges of	f dire	ction	(000	<b>36</b> 0	))°	<u> </u>							calm	er of (TN)	wind (\$)
Time	Pressure Surface Millibar	34	/	01 04	Ī	04	1	10	1		05 / 34	10	/		65 / 94	19	1	l	25 / 54	25 25	/		35 / 14	31	1	g e	Total number observations (	feen scalar win speed (Knots)
		N	m (ff)	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m.	N	(ff) m	Number win	Total observ	Mean
0000 UA.	Surface 1000 850 700 600 500 400 300 200 150 100 70 60 50 40 30 20 10	2 6 3 0 0 0 0 0 0 0 	12 10 9 	5 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 10	000000000000000000000000000000000000000	3	1 2 0 0 0 0 0 0 0 0	7 10             	1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 15 — — — — — — — —	2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 19	000000000000000000000000000000000000000	20	1 0 2 0 0 0 0 0 0 0 0	14 	1 0 4 1 0 2 1 1 1 0 0 — — — — — — — — — — — — — — —	1 14 40 49 49 82 97 — — —	1 1 3 2 5 3 4 3 3 1 —————————————————————————————	2 7 16 32 31 32 34 74 73 71 —	5 4 5 2 0 0 0 0 1 0 0	12 18 20 ———————————————————————————————————	2 3 4 0 0 0 0 0 0 -	9 11 20	3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	26 25 21 5 5 5 5 4 1 —	6 12 16 28 31 35 37 63 79 71 —————————————————————————————————
1200 U.T.	Surface 1000 850 700 600 500 400 300 200 150 100 70 60 50 40 30 20	5 8 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 16 15 — — —	8 3 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 20	000000000000000000000000000000000000000	11	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	=	3 1 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	40	0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6	0 0 2 0 0 0 0 0 0 0	-   10   -   -   -   -   -   -   -   -   -   -	0 0 3 5 6 9 8 5 1 0	24 22 39 44 50 57 102	0 0 3 7 12 11 11 7 4 3 	29 25 30 38 51 55 59 97 ——————————————————————————————	1 9 9 4 3 2 1 0 0 — — — — — — — — — — — — — — — — —	24 20 24 32 34 38 104 ———————————————————————————————————	5 8 5 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18 19 17 	0000000	26 26 23 23 21 13 5	18 16 20 23 32 40 50 65 87 97 —

N - The number of cases the element has been observed during the month.

TN - The total number of cases the wind has been observed for all directions during the month.

# TABLE B 8 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN - MAY 1966

	1							7	Wind	betwee	n rai	ges o	f dire	etion	(000	<b>-36</b> 0	)°							<del></del>	ce lm	er of	a ind
Tine.	Prossure Surface Milliber		45 /	01	<i>i</i> 1	045 / 074		075 / 104		105 / 134		35 / 64		85 / 94	19 / 22		22 / 25		25 / 28	٠ }	28	/	31 34	ľ	5-5	number ations (J	scalar owind ed (Knots)
		N	(ff) m	N	(ff)	N	ff) i	N (f	]	N (ff) m	N	(ff) m	N	(ff)	N	(ff) m	N	(ff)	N	(ff) m	N	(ff) m	N	(ff)	Number win	Total .	Mean spee
0000 U.T.	Surface 1000 850 700 600 500 400 300 200 150 100 70 60 50 40 30	7 1 6 1 1 0 0 0 0 0 0 0 0 0 0	9 8 16 7 8 — — — — — — — — — — — — — — — — — —	12 3 5 0 1 0 0 0 0 0 0 0 0 0 0 0	12 18 15 - 9 - - - - - - - - - - - - - - - - -	1 0 0 0 0 0 0 0 0 0	14 17	0	-   -   -   -   6	0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6     13 12  	0 0 1 0 0 0 0 0 0 0 0 0 0 0	7	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0 0 1 6 6 10 11 9 10 3 2 0 1 0 0	22 31 40 44 43 61 98 82 50 — 33 —	0 0 6 10 13 15 17 17 7 8 0 0 0 0		0 0 4 7 9 5 2 2 4 0 0 0 0 0	14 17 26 25 38 52 81 ———————————————————————————————————	3 0 8 7 1 0 0 0 0 0 0 0 0 0 0	6 14 17 17	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	31 5 31 31 31 30 28 21 11 3 2 2 2 1	19 16 15 23 31 33 44 63 88 86 40 13 22 12 3 6 5
1900 U.T.	Surface 1000 850 700 600 500 400 300 290 150 100 70 60 40 30 20 10	10 2 4 4 1 0 0 0 0 0 0 0 0 0	13 16 14 17 7 ———————————————————————————————	5 1 10 0 0 0 0 0 0 0 0 0 0 0	12 19 10 5 	0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	4	0	5 2	0	0 0 1 0 0 0 0 0 0 0 0 0 0 1 1 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 	0 0 4 8 11 14 13 14 5 3 1 0 0 0	18 29 33 39 52 71 102 94 70	3 0 1 6 12 13 16 12 8 6 4 0 0 0 0	10 12 21 23 27 41 58 67 64 46 ——————————————————————————————	3 1 2 5 4 3 2 2 1 1 0 0 0 0 0	10 10 14 14 26 33 34 56 66 50	9 1 7 6 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 12 14 20 31 ———————————————————————————————————	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	31 5 31 31 31 31 28 15 5 3 2 2 1	11 14 13 21 27 34 47 64 78 72 51 42 22 28 88 17 11

N = The number of cases the element has been observed during the month.

TH - The total number of eases the wind has been observed for all directions during the month.

# TABLE B 8 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES. ASWAN (A) — MAY 1966

	1	Pressure Surface Millibar					<u> </u>			Wir	nd be	tweer	rang	ges of	dire	etion	(000-	<b>-360</b> )	•					-		-	oalm	r of (TN)	wind te)
			34	4	015		045		075			105		5 4	16 / 19	4	195 / 224		225 / 254		254 / 284	<u>.</u>	285 / 314		31 / 34	4	umber of ca winds	numbe	soslar d (Kno
-			N	(ff) m	N	(ff) m	N	(ff)   m	N	m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	m	N	(ff)   m	N	(ff) m	N	(ff) m	Num	Total observ	peeds
	0000 U.T.	Surface 1000 850 700 600 500 400 300 200 150 100 70 60 50 40 30 20 10	11 -4 4 2 0 0 0 0 	10	1 6 0 2 0 0 0 0 0 -		2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9	1 3 0 0 0 0 0 0 0 0 0 0 1 2 	7 9	0 2 1 1 0 0 0 0 - 2 - 1	13 13 5 	0 1 0 1 0 0 0 0 0	6	0 0 1 1 0 0 0 0 1	7 16 ———————————————————————————————————	0 0 0 1 2 3 1 0 2 2 -	14 27 28 35 44 20	0 0 2 4 9 8 8 6 4	15 24 27 36 46 63 58 25	0 2 3 5 0 3 4 7 6 2 —		0 1 3 3 3 2 3 1 0	10 20 12 24 31 29 47 	2 1 3 0 3 1 1 0 -	8 -7 8 -17 111 200 58 	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 19 19 19 19 17 17 17 14 9 3 2 1	8 
_	1200 U.T.	Surface 1000 850 700 600 500 400 300 200 150 100 70 60 50 40 30 20		28 11 11 11 11 11 11 11 11 11 11 11 11 11	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 12 12 10	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		3 2 0 3 1	8	3		0 0	1	0   1 	15 19 	0 0 0 1 4 4 0 0 1 3	}	=	30 34 28 28 58 62 47 33	-	24 42 63 41 - 8	2	61 56 64 18 —		9	000000000000000000000000000000000000000	16 16 15 14 13 13 12 9 10 9 6 4 4 4 4	19 

N - The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

#### REVIEW OF AGRO-METEOROLOGICAL STATIONS

#### EL KASR-MAY 1966

This month was slightly colder and less rainy than normal. Mean daily air temperature and total rainfall were below normal by 0.3 °C and 3.6 mms respectively.

Daily maximum air temperature all over the month was below normal except at the end of the month when an intense heat wave started on the 28th and attained its peak on the 30th when the highest maximum air temperature, as well as extreme maximum soil temperature down to 20 cms depth, were recorded. Highest amount of Piche and pan «A» evaporation also took place on that day.

The extreme maxima of soil temperature at all depths were higher than the corresponding values of last May, deviations varied between 0.3 °C and 4.4 °C. The extreme minima of soil temperature for surface layers up to 2 cms depth were lower than the corresponding values of last May, while that of 5 cms depth was the same as that of last May, for more depths up to 100 cms depth were higher than the corresponding values of May 1965. Deviations for surface layers varied between -2.9 °C to -0.2 °C while for the layers from 10 cms depth to 100 cms depth, deviations lay between 0.3 °C to 0.9 °C.

Mean daily wind speed at 2 metres was 0.7 m/sec lower than the corresponding value of May 1965. Mean daily Piche and pan «A evaporation were lower than the corresponding values of last May by 2.8 mms and 0.83 mms respectively. Total actual sunshine duration was 23.4 hours below the corresponding value om May 1965.

#### TAHRIR-MAY 1966

This month was slightly warmer and less dry when compared with May 1965. Mean daily air temperature at 2 metres height above ground level was 0.7 °C above the corresponding value of last May. Mean daily relative humidity and mean daily vapour pressure were higher than the corresponding values of last May by 2% and 1.0 mms. respectively.

The month was characterised by three marked heat waves with peaks on 12, 18 and 31st. No significant weather phenomena occurred all over the month except for rain drops on the 1st and on 20 to 22nd mm inclusive. The last wave was the most intense and the most important regarding the occurrence of extreme values. On 31 was recorded the highest day time mean and daily mean air temperatures, also the highest maximum and highest minimum air temperatures, the lowest daily evaporation from Piche and pan A. Also the extreme maximum soil temperatures down to one metre occurred on that day.

The extreme maxima of soil temperature at depthes down to 20 cms were higher than the corresponding values of last May, deviations lay between 2.8 °C to 0.6, while at half and one metre they were less by 0.3 °C and 0.5 °C respectively. The extreme minima were all the way down higher by 3.5 °C to 1.0 °C.

Mean daily wind speed at 2 metres was 0.3m/sec, lower than the corresponding value of May 1965. Mean daily values of Piche and pan «A» evaporation were lower by 2.0 mms and 0.35 mms respectively than the corresponding values of last May. Total actual sunshine duration was 37.3 hours below the corresponding value of May 1965.

#### GIZA-MAY 1966

This month was generally mild. Mean daily air temperature at 2 metres height above ground level was 0.1°C above normal, while mean daily relative humidity was the same as the normal value. No significant weather phenomena occurred all over the month except for some rising dust on 18th and rain drops on 19th, 21st.

The month was characterised by three heat waves, with peaks on 12; 18 for the first 2 waves, while the last one had its peak on the second of June. The first wave yielded on the 12th the extreme minimum relative humidity of the month. The 2nd wave gave rise on 18th to the extreme maximum air temperature, and gave rise also to the highest evaporation values from Piche and pan «A».

The extreme maxima of soil temperature were lower than the corresponding values of last May, except for the depths 5 and 10 cms. where the maxima were more by 2.8 °C and 1.3°C respectively; deviations varied between 9.1 °C and 0.1 °C. The extreme minima of soil temperature were exclusively higher than the corresponding values of last May by 5.0 °C to 0.4°C.

Mean daily wind speed at 2 metres was 0.2 m/Sec. more than the average. Mean Piche evaporation was 0.4 mm below the average while that of Pan (A) was higher by 0.05 mms. Mean daily potential evapotranspiration was 0.9 mm lower than the corresponding value of last year. Total actual sunshine duration was below average by 18 hours or 4% if possible duration.

#### KHARGA-MAY 1966

This month was warmer and more rainy than normal. Mean daily air temperature at 2 metres height above ground level and total rainfall were above normal by 1.3 °C and 0.9 mm respectively.

The month was characterised by a prolonged excessive heat wave between the 9th to the 21st of the month with its peak on the 18th when the absolute maximum air temperature was recorded. The heat wave was followed by a cold spell in the period 22nd to 29th.

The extreme maxima of soil temperatures at depths down to 10 cms. were lower than the corresponding values of last May and the deviations varied between -7.0 °C to -1.2 °C. Maximum value of depth 20 cms. was the same as that of last year, while for 50 cms. depth and 100 cms. depth, the maxima values were higher than the corresponding values of May 1965 by 0.6 °C and 0.5 °C respectively. The extreme minima of soil temperatures at all depths were higher than the corresponding values of last May and the deviations lay between 0.2 °C to 2.9 °C.

Mean daily wind speed at 2 metres above ground was 1.3 m/sec. higher the corresponding value of May 1965. Mean daily Piche and pan «A» evaporation were higher than the corresponding values of last May by 8.5 mms. and 3.44 mms. respectively. Total actual sunshine duration was 26.2 hours more than the corresponding value of May 1965.

#### TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND MAY — 1966

		Air Te	Mean Duration in hours of daily air temperature above the following values													
STATION	Mean Max.	Mean Min.	Mean of the day	Night time maan	Day time mean	_5°C	0.C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	24.4	14.2	<b>i</b> i		21.8			24.0	23.9	21.7	11.3 15.3	1.5 8.7	0.3 3.3	0.1	0.0	0.0
Tahrir	31.5	15.3	23.0	19.2 21.2	25.7 26.1	24.0	24.0	24.0	24.0	23.0	15.1	9.4	2.7	0.6	0.0	0.0
Kharga	37.6	22.6	30.4	27.6	32.6	24.0	24.0	24.0	24.0	24.0	23.8	19.5	12.0	5.1	1.4	0.0

# TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

MAY - 1966

	Max.	Temp. a	t 2 metre	s (°C)	Min.	Temp. a	t 2 metres	(°C)	Min. Temp. at 5 cms. ahove (°C)					
STATION	Highest			west	Hig	hest	Low	rest	Dry	soil	Grass			
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date		
El Kasr	37.8 40.3 42.6	30th 31 st 18th	21.2 26.7 25.9	2,3nd,rd 23rd 23rd	17.9 20.2 20.7	15sh 31 st 19th	8.2 11.0 11.9	10th 8th 9th	4.7 9.2 7.4	10th 8th 9th	9.3			
Kharga	46.0	18th	29.1	25th	28.9	19th	13.4	8th	10.7	8th	-	_		

### TABLE C 8.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE HUMIDITY, VAPOUR PRESSURE AT 2 METRES EVAPORATION & RAINFALL

MAY — 1966

	r) Radia- cal/om <sup>2</sup>	Duratio Sunshi	Relative Humidity %							Vap	our p	rêssure	(mms	)	Eval	pora- nms)	Raini	infall (mms)			
STATION	(Solar+Sky) I tion gm. cal	Total Actual monthly	Total Possi le monthly	%	Dura in h	ours >	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day	DATE
<del></del>																	1				
El Kasr.	<b>534</b> .5	3 <b>3</b> 6.5	425.9	79	-	-	74	66	40	8	13.5	14.1	18.9	31	6.7	80	9.4	8.75	0.0	0.0	<b>)</b> —
Tahrir .	<b>52</b> 7.8	337.7	424.6	80	1.6	5.6	57	30	14	18.31	11.0	9.1	15.7	12-18	5.5	14	15.4	10.74	Tr.		1,20,
Gisa	561.9	<b>324</b> .9	423.2	77	0.1	2.3	51	28	11	12	10.4	8.9	15.3	20	4.3	9	18.0	11.37	0.0	0.0	-
Kharga .	532.7	294.3	413.9	71	0.0	0.1	21	15	5	11	6.4	6.4	12.3	21	2.4	11	47.9	21.64	1.1	1,1	25
																	<b>.</b>				

TABLE C. 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS (cms)
IN DIFFERENT FIELDS

MAY - 1966

STATION	set (H)	1	Extr			-		(°C) 18 (01	in dr as.)	y field	Extreme soil temperature (°C) in grass field at different depths (cms.)										
	Highest Lowest	0.3	1	2	5	10	20	50	100	200	300	0.8	1	2	5	10	20	50	100	200	800
El Kasr	H								22.8 20.8			_	_	_	1 1	_		_	_	_	_
Tahrir									27.2 25.2				=	_	_	_	=	_	=	_	_
Giga	H L	62.4 13.6	57. <b>6</b> 15.0	55.7 15.6	44.6 20.3	37.2 24.6	31.3 27.2	29.1 27.0	27.0 25.0	24.6 23.1	23.9 23.4	36.5 14.1	32.7 14.2	30.5 14.4	28.5 17.8	26.8 19.5	24.7 21.4	23.2 21.4	21.9 20.1	21.0 19.7	_
Kharga	H L	_ _							30.0 27.4				_			_	  -	=	_	_	_
				<u> </u>			]	1													

#### TABLE C 5 .- SURFACE WIND

.MAY - 1966

		d Speed nat 2 metre				Max. Gust (knote) at 10 metres						
STATION	Mean of the day	Night time mean	Day time mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value	Date
El Kasr	3.2	2.4	4.2	_		_						
Tahrir	2.9	2.4	3.7	31	21	5	2	0	0	0	34	18
Gima	8.0	2.7	8.5	31	20	2	0	0	o	0	33	18
Kharga	5.4	4.7	6.4	30	28	17	9	3	1	0	39	24
			1	1			1		1			1

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